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ABSTRACT

This digest on the economics of information in education argues that the production, organization, analysis, evaluation, and dissemination of information in education constitute major economic activities, with associated costs and benefits. The document comprises sections on: the value of information; information as an "economic good"; the economic importance of information at the dissemination stage; examples of the types of information needed by students, administrators, policy-makers, and teachers; methods of information delivery and examples of systems oriented toward students, teachers, and administrators; and costs and prices of information delivery systems. A list of references is included. (THC)

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ERIC DIGEST

ECONOMICS OF INFORMATION IN EDUCATION

The economics of information is based on the concept that quality information is a scarce and valuable resource. The production, organization, analysis, evaluation, and dissemination of information in education constitute major economic activities, with associated costs and benefits. That is to say, it requires labor and capital (costs) to produce information products of value to potential users (benefits).

Why is information valuable?

The *value* (benefit, use) of information depends in part on its level of accuracy, timeliness, completeness, reliability, and relevance to issues under consideration by a client or customer. Information possessing these qualities is assumed to improve decision-making by both the consumers and suppliers of education. That decisions must be based on high quality information is axiomatic; quality information is especially critical in times of rapid technological, occupational, demographic, and social change.

Why is information an "economic good"?

Information is an economic good because scarce resources—e.g., labor and capital—are employed in its production, organization, analysis, evaluation, and dissemination. The process includes selection, editing, abstracting, indexing, and classification. The final stage, dissemination, occurs once the resource is packaged and made available to users.

Costs are incurred at every stage of this "life cycle." Information is thus a *product* that, in some instances, is subject to the laws of supply and demand, e.g., data available through ERIC and other online databases.

Economic importance of information at the dissemination stage

The dissemination of information conveys the following benefits:

- minimizes the costs to the user of time and effort spent searching for information
- raises probability of the effective utilization of information through filtering processes which evaluate and tailor data to suit specific user needs
- promotes efficiency by preventing waste and duplication of effort, while providing for the sharing of ideas across federal and state educational networks
- allows optimal allocation of resources by fostering informed decisions based on relevant data.

Examples of information needs

Individuals involved in all aspects of education require information for a variety of purposes. The following are examples:

Students' needs:

- career profiles/occupational outlook
- details on colleges and universities: programs, financial aid, placement records
- government assistance, special programs, and scholarships

Administrators' and policy-makers' needs:

- staffing forecasts at the local, regional, state, and national levels
- awareness of exemplary programs implemented successfully elsewhere
- awareness of types of programs and services which attract students

Research at a community college (Beavers, 1982) suggests that administrators do not receive adequate information on students' placement, alumni professional development, instruction and curricula, etc.

Teachers' needs:

- awareness of recent developments in instruction
- awareness of research in the field
- exchange of ideas and experiences with colleagues

Information delivery systems: Methods and examples

Methods of dissemination. The distribution of information occurs through the following kinds of channels:

- information clearinghouses
- publications
- networks
- seminars, conferences, workshops, and other meetings

These systems may be formal or informal, automated (online), manual, or verbal; they may be developed for a specific target audience, or contain information that is of general use.

Examples of information delivery systems.

Oriented toward students:

- Students' employment information services
 - Career information centers located in high schools and community colleges offer occupational information.
 - Student employment information services sponsored by educational consortia provide data on overall demand and supply according to specific majors, and on employment trends over several years.
 - The U.S. Department of Labor National Occupation Information Service funds eight statewide agencies, e.g., the Wisconsin Career Information system described by Lambert.

• Pre-college choices

—Workshops are conducted by high schools to inform college-bound students of academic programs and services offered by colleges. Information on course scheduling has been rated as the most helpful.

—Project CHOICE (Center for Helping Institutions Improve Choice in Education) assists secondary institutions in the revision of in-

formation provided to prospective students. The operation of a clearinghouse on student information and the coordination of a national consulting network are two major activities of the project.

- State agencies are assuming an increasingly important role in disseminating information about postsecondary educational institutions in their states. Gill has investigated the extent, type, and quality of information provided by 35 state agencies, and indicates problems such as inconsistent coverage of college and university details, lack of information for transfer students, and the difficulty students face in comparing the same types of information displayed in different formats by different state agencies. The study also identifies some agencies that might serve as models for others.

Oriented toward administrators and teachers:

- *National Diffusion Network (NDN)* helps elementary and secondary school administrators identify, adopt, and replicate successful programs (Batsche). This network has three interactive components (linkages):

- The U.S. Department of Education, which administers funds and validates the projects

- The "demonstrators/developers" who design and test projects

- The state facilitator, who fosters awareness of exemplary programs. Projects that have been adopted are described by Neill.

For the planning of vocational programs, databases such as the *Regional Manpower Information System* in Indiana and the *Vocational Education Data System Database* offer data on occupational supply and demand, employment qualifications, employers' feedback, and on such details of vocational programs as staffing, expenditures, and curricula.

The *Illinois Technical Assistance and Dissemination Network* provides technical assistance and resources to local districts for the improvement of vocational education for special needs students. Special needs consultants and "catalysts" are important to the success of the system. A dissemination center also provides materials, state-level inservice training, and resource assistance to schools.

Oriented toward teachers:

- *Liaison officers* in certain programs bring preschool education research results to the attention of interested practitioners.

- *The National Institute of Education's Research and Development Utilization Program* disseminates educational material.

- *Project SET*, designed by the Australian Council for Educational Research, disseminates packages of articles presenting educational research in a journalistic style.

- *Teacher centers* allow practitioners to share their ideas, problems, and classroom experiences. These centers function as forums for exhibits, inservice education, curriculum development, and resource sharing. *Telecommunications networks* such as the one in Montana link teacher centers in geographically remote rural areas to universities.

- *Educational Resources Information Center (ERIC)* clearinghouses disseminate information on documents available in the ERIC database. A study conducted by Hull indicates that the majority of ERIC distributions related to vocational education consist of instructional guides and research reports.

Costs and prices of information delivery systems

Most information delivery systems have been funded by state or federal agencies. Cost analyses are rarely reported in the literature, one notable exception being a cost and usage study of the ERIC (Educational Resources Information Center) system (McDonald et al., 1981). Most services, except for online computer searches, are provided free of charge. One of the primary purposes of these systems is to convey the maximum social benefit to students, administrators, and teachers.

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